AUGUST 1947

FIREMEN

FIFTY-FIRST YEAR • NATIONAL FIRE PROTECTION ASSOCIATION

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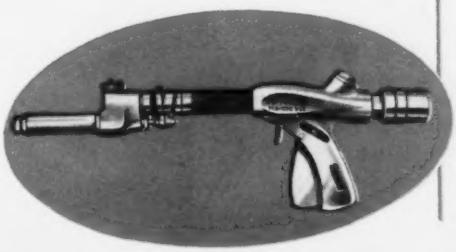

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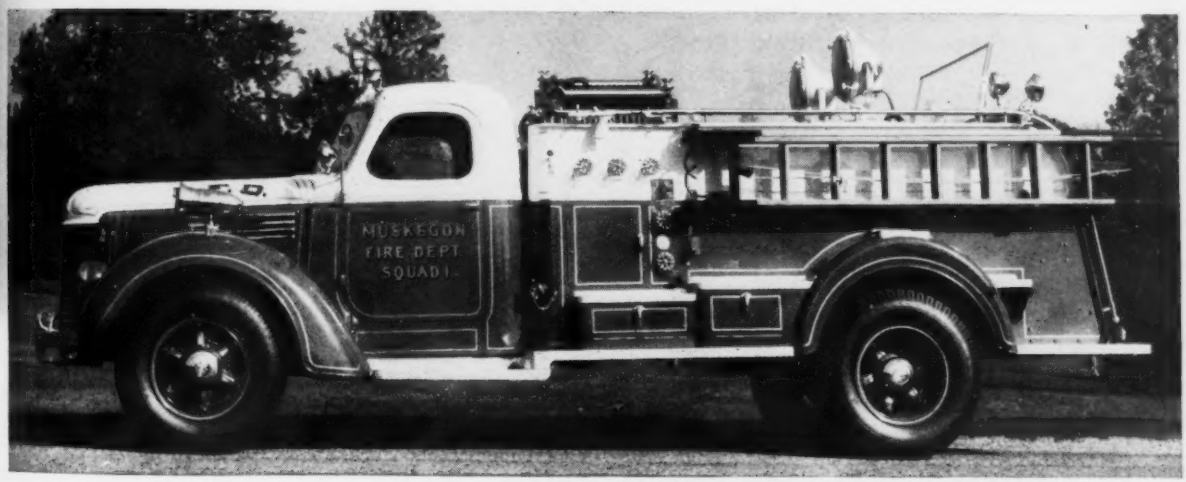

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TRIPLE COMBINATION PUMPERS—500 TO 1250 GALLONS . . . SQUAD WAGONS . . . CITY SERVICE AND QUADRUPLE COMBINATION LADDER TRUCKS

Firemen

Volume 14 Number 8

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FIRE LOSSES in the United States for the month of June totaled $50,840,000, according to the National Board of Fire Underwriters' estimates. This was an increase of 14.9 percent over June, 1946, losses.

Losses in this country for the 12-month period ending June 30 totaled $633,457,000, as compared with $519,244,000 for the same period a year ago.

"FIRE PREVENTION is an organized effort to control, through engineering, education, and enforcement, the inception and initial extension of fires caused by carelessness, malicious intent, or by nature."

— A definition developed in an instructor training class for fire department inspectors conducted at the Fitchburg State Teachers College, July 1947, by the Massachusetts State Department of Education.

IT IS a proud moment in the calendar of any fire department when a long awaited new pumper passes its acceptance test. The cover picture this month shows part of a fleet of twenty new pumpers, manufactured by American-La France-Foamite Corporation for the Fire Department of the City of New York, undergoing a pumper performance test.

Many fire fighters may be interested in knowing something about the pumpers purchased by the world's largest municipal fire department. At one time the FDNY bought super pumpers capable of delivering 1,000 gpm at 160 psi and smaller quantities at pressures up to 600 psi. Long experience, however, proved that such pumping juggernauts were as unnecessary as they were unwieldy or inflexible. Recent pumper purchases of the FDNY and of most other large cities have conformed in general to the recommendations made a few years ago by the Motor Fire Apparatus Manufacturers Association, now designated as Class A apparatus specifications by the International Association of Fire Chiefs. These specifications call for capacity at 150 psi, 70 percent capacity at 200 psi, 50 percent capacity at 250 psi, and 40 percent at 300 psi.

New pumper proves hill climbing ability.

The last forty pumpers purchased by New York City have been of 750 gpm capacity rated at 150 psi. These machines are rated to deliver well over 500 gpm at 200 psi but, in acceptance tests, actually proved capable of delivering full capacity at 200 psi. From a good hydrant a modern Class A 750 gpm pumper frequently will deliver in excess of 1,000 gpm. This is about all the water an average city fire company is prepared to handle with the hose and manpower available.

Underwriters' acceptance tests for some 35 years have required delivery of pumper capacity at 120 psi. (Class B pumps under the specifications of the International Association of Fire Chiefs.) This figure reportedly was selected to give a margin of safety for the then unproved gasoline driven pumping apparatus, as compared with the steam driven fire pumpers which were rated at 100 psi.

The modern Class A 750 gpm pumper in performance is the approximate equivalent of the old 1,000 gpm pumper. It is capable of delivering at least two good hand lines or a single heavy siamesed stream at high pressures, something the old 750 pumper could not always do. Some authorities point out that the change in the basis of pumper ratings largely is a matter of terminology, but many fire departments find it easier to obtain appropriations for a Class A 750 gpm pumper than to argue their need for a 1,000 gpm machine at the old rating. Most of the smaller pieces of apparatus assembled on commercial truck chassis continue to be built to give 500 gpm capacity at the old 120 psi rating. This makes possible underwriters' recognition of pumpers for hundreds of small communities.

Conflagration in Japan

Report by G. W. Angell (NFPA member)
Chief Fire Administrator, Civil Intelligence Section, U. S. Occupation Forces

ON APRIL 20, at 11:20 A.M., fire, originating in a private dwelling, spread quickly to adjoining buildings and destroyed 4,010 buildings, rendering 17,771 persons homeless in Iida, Nagano Prefecture, a Japanese city of about thirty-seven thousand. Two persons were killed, 2 were missing, and 92 injured.

Water was being heated on a wood-fired stove whose metal chimney terminated beneath the eave of the two-storied frame dwelling. A crackling sound was heard and investigation disclosed a fire which had started under the eave, apparently from sparks or an overheated chimney. The woman who discovered the fire rushed downstairs into the street yelling, "Fire!"

The local fire station, like most city fire stations throughout Japan, was provided with a watchtower, but Iida employed only four paid firemen per shift (a total of eight men) and no one was on duty in the tower. A passerby ran the 880 meters (a little over half a mile) to the fire station to notify the fire department. Before the arrival of the fire department, 2½-inch linen hose, universally used by Japanese fire departments, was attached to a nearby hydrant, but the water pressure was too low to produce a satisfactory hose stream.

The Iida Fire Department is said to have two 475 gpm pumpers, but only one was in service at the time of the fire — 1934 second-hand Ford passenger car made into a pumper. (At the time of the large fire in Iida in May, 1946, we were told that the city had three pumpers, but we were able to locate only one — this same 1934 Ford. We were told that the other two were being repaired. Frankly, we believe they have only one pumper. It was reported that the pumper arrived at the scene of the fire but was delayed in going into action because the suction hose coupling would not fit the hydrant. As a stop-gap until suitable suction hose could be procured from the local volunteer fire department, water was flowed from the hydrant into a canvas bucket and the pump suction taken from that source.

Most Japanese buildings are constructed of wood with ⅜-inch boards for siding. Some have roofs covered with 1/16- x 4- x 10-inch shingles, and in most cases the buildings are very congested. Actual tests made in single-storied residence-types of Japanese construction show that fires burn through the roofs in 8 to 12 minutes after ignition occurs within the building near floor level. It is understandable, therefore, how the Iida fire traveled so rapidly from one building to another. The main, and widest, street was 12 meters (40 feet) in width, most others being 6 and 8 meters.

Water was supplied from dammed-up ditches, which extended along the curblines of some streets, and from a swimming pool near a girls' school. But the water in the immediate vicinity of the fire's origin was scant, pumping capacity inadequate and, although the fire department owns 120 lengths (20 meters each length, or 66 feet) of 2½-inch linen hose, only 20 lengths were said to be in usable condition.

At the beginning of the fire (11:20 A.M.) a 6 mph wind was blowing from the south. This increased to a maximum of 17½ mph at two o'clock and shifted to a 10 mph south-southeast wind at five o'clock. This change of wind, plus the demolition of fourteen buildings, tended to reduce the intensity of the fire but it was really not brought under control until about 15½ hours after its start.

No consideration had been given to city planning, building codes, zoning laws, or fire prevention ordinances. It was interesting to note that seventeen schools in the city, each surrounded by a sizeable playground, were undamaged. "Go-downs" (warehouses), usually constructed with wood frames, bamboo lath, and covered with ¾ inch to 1 inch of stucco, were not damaged.

The water supply consisted of a covered reservoir having a capacity of approximately two million gallons. Water flows from mountain streams to the filter beds and into the reservoir. Our investigation disclosed that the mayor, who was also head of the water department, had not visited the

Continued on page 20

This house, wood frame and stuccoed, was little damaged and people continued to live in it.

Part of this area was destroyed in the May 1946 fire, rebuilt and destroyed again in the early spring conflagration.

Training of Crash Fire Fighters in Nassau County, New York

THE value of training volunteer and paid firemen in crash fire fighting techniques, as followed by Army Air Force crash fire fighting personnel, has been proven in Hempstead, N. Y.

At approximately 2.15 P.M., May 2, an Army A-26B (Douglas Invader) crashed in the village of Hempstead, about 2½ miles from the Army Air Base at Mitchel Field at which the aircraft was preparing to land. Shortly after, the alarm was received at the Army Air Base and the base crash apparatus was dispatched immediately.

Upon the arrival of the Mitchel Field apparatus, the Hempstead Volunteer Fire Department was found cooling the engines and taking further precautions to prevent the outbreak of fire. No fire had resulted at the time of the crash, although the aircraft had 500 gallons of gasoline aboard. Unfortunately, the pilot and crew chief were killed by the impact and thrown clear of the aircraft. The danger of fire resulting from the crash was held to a minimum, due to the technical and practical knowledge which the volunteer fire department had acquired at demonstrations and drills held by the Mitchel Field crash fire fighting section.

High - pressure water streams, foam and carbon dioxide were used to **prevent** a fire in this crashed aircraft carrying 500 gallons of gasoline.

Official Photograph, U. S. Army Air Corps, Mitchel Field

IN THE latter part of 1946, the Mitchel Field Fire Department completed an educational campaign in training local fire departments in the techniques of aircraft rescue and fire fighting problems. This training was arranged by Fire Marshals George Clough and Wilbur Seaman, representing the Fire Chief's Council of Nassau County, and Col. L. R. Parker, base commander, Col. C. E. Freeman, deputy base commander, and Fire Chief Milton M. Fischer, of Mitchel Field.

A separate demonstration was held for each of the nine battalion districts of Nassau County. During these demonstrations two different methods of fighting aircraft fires were displayed with spills of gasoline mixed with oil and ignited. Simulated rescues were performed and fires extinguished with high-pressure fog and liquid foam.

After the demonstrations by the base crash fire fighting unit, the fire departments attending the demonstration were allowed to extinguish gasoline spills using their own equipment while receiving instruction by the Mitchel Field supervisory personnel. Informal discussions were held during these periods and information regarding equipment and methods employed was given to the attending departments. Each demonstration was attended by at least eight fire departments and approximately 300 volunteer or part-paid fire fighters.

In addition to the training received by the Nassau County fire departments, a similar training demonstration and drill was held for the Holbrook Volunteer Fire Department of Suffolk County, N. Y., providing protection for MacArthur Field, home base of Lockheed Aircraft Corp. and several commercial airlines.

In addition to the Army Air Base at Mitchel Field and Roosevelt Field (a civilian airport only one mile away from Mitchel Field) which are both in Nassau County, the new Idlewild Airport, which upon completion will be the largest in the world, and La-Guardia Airport, which is now one of the busiest, border on Nassau County. This creates heavy aircraft traffic over the county. As a result of this special training program, the fire departments of the county stand better prepared to combat aircraft crash fires which may occur in their home districts.

Bellefonte, Pa., Crash

COMMUNITY airports require their own crash protection.

To illustrate this necessity, a recent crash at the Bellefonte, Pa., Airport is cited. The accident occurred on April 29 and involved a single-engine Stinson airplane operated by All-American Aviation to provide air mail service to communities in the Maryland-Pennsylvania area.

It was 5:30 P.M. when the aircraft appeared over the airfield to make its airborne mail pick-up. The pilot swooped low over the field in a normal procedural maneuver. On this particular occasion, however, he missed the pick-up station and the aircraft dove into the ground in an open field adjoining the airport.

Fire broke out immediately upon impact and spread with rapidity because of the gasoline spill (a total of 57 gallons), the lubricating oil, the doped fabric covering on the fuselage and wings, and the combustible materials present in the form of mail and clothing. The pilot and mechanic were trapped inside the aircraft surrounded

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New Standards for: Rural Apparatus

THE NFPA Annual Meeting, held at the Palmer House in Chicago, May 26–29, adopted revised standards for rural pumpers and water tank trucks as recommended by the NFPA Committee on Farm Fire Protection. These standards appear as Part I of the NFPA Standard *Volunteer Fire Departments for Rural and Small Community Service*, available from the NFPA Executive Office at 50 cents a single copy.

Former editions of this standard have been in widespread demand, as hundreds of new rural fire departments were organized during the war. Many more are being organized at the present time under the impetus of state-wide rural fire protection programs. As the 1943 edition of this standard was exhausted, it appeared desirable to prepare a new edition, taking cognizance of extensive developments and experience in the field of rural fire apparatus. Accordingly, at the request of Professor Henry Giese, of Iowa, chairman of the Committee on Farm Fire Protection, the revision was prepared under the direction of NFPA Engineer Warren Y. Kimball, editor of FIREMEN, in cooperation with members of the Committee on Farm Fire Protection after consultation with manufacturers of rural fire apparatus, representatives of rural fire protection organizations, and experienced rural fire fighters.

There appeared to be almost universal agreement on the part of firemen that the former standards erred on the side of inadequate water tank capacity for both rural pumpers and water tank apparatus. On the other hand, manufacturers have been alarmed by the tendency of many rural fire departments to order water tanks of sizes that impose loads far beyond the job rating of the chassis to be employed. The new suggestions are intended to balance water and hose load requirements with chassis load ratings. These standards are based upon the performance ability of modern 1½-ton and 2-ton commercial chassis commonly used for rural equipment. In general, 500-gallon tanks are recommended for the tank apparatus and tanks of at least 200-gallon capacity are recommended for pumpers.

Another change is an increased pump capacity for the water tank apparatus to make it capable of supplying at least two streams through 1½-inch hose. This size makes possible control of many rural fires that cannot be extinguished with the single ¾-inch booster line provided under the former specifications. In addition, two reels of booster hose are recommended for both pumpers and tank apparatus. This has been proven an important provision, as many fires can only be controlled by simultaneous application of small streams from two points of attack, as may be the case with fires spreading through partitions and concealed spaces.

The importance of providing suitable connections and valves to permit rural relay pumping is recognized. The need for facilities for utilizing rural water supplies out of reach of normal pumper suction caused addition of suction boosters and portable pumps to the list of desirable supplemental equipment to be carried by rural apparatus.

It is appreciated that, at the moment, cost of fire equipment is high and in some rural communities types of apparatus of more limited extinguishing capacity that do not meet these minimum good practice standards may be provided. Even in such cases, a knowledge of what is good practice should be of major assistance to those charged with providing rural fire protection. On the other hand, these standards cannot anticipate improvements in commercial chassis and motors and improvements in fire pump design, which, within another two or three years, may be expected to make possible further advances in rural fire truck design.

A more detailed list of the most important changes in rural fire apparatus standards follows. These standards appear as Part I, *Volunteer Fire Departments for Rural and Small Community Service*, published by the NFPA.

As modern commercial trucks can provide power for a 500 gpm pumper, and because this is the smallest size recognized by most insurance inspection or rating bureaus, reference to pumpers of smaller capacity is eliminated except for booster pumps on water tank apparatus.

In order to guard against excessive chassis overload and to assure reliable all-weather service at rural fires, dual rear wheels have been made mandatory rather than optional for apparatus built on small commercial chassis.

At least one pump intake is to be gated to permit replenishment of tank supply or relay pumping operations with 2½-inch hose without interruption. Provision of either a front or rear intake connection to facilitate drafting from open water sources is recommended, although not mandatory.

The size of piping between the booster tank and the pump is increased to not less than 2-inch internal diameter. Small pipe sizes from the tank to pump have been a source of frequent complaint by rural fire fighters because of preventing an

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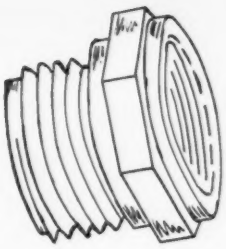
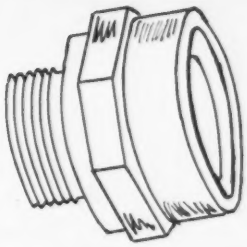
MAKING A GOOD JOB OF IT

BY WARREN Y. KIMBALL



Adapter - Garden to booster hose



Adapter - Booster to garden hose

Adapters for Small Hose

THE SMALL size or low cost of an appliance is not necessarily the proper gage of its usefulness in the fire service. Examples of this fact are the small adapters used for connecting booster or chemical hose thread with garden hose thread. These appliances, usually less than 1½-inch long, weighing but a few ounces, and of small cost, may be an invaluable convenience to the suburban and rural fire department. For example, Chief T. W. Scott, Jr., of the Cottage City, Md., Volunteer Fire Department, went so far as to say that the booster-garden thread adapter was their most useful small appliance.

In sections where water supplies must be carried in booster tanks because of lack of hydrant service, ability to utilize even small domestic water supplies is often of crucial importance. In addition to 300 or more feet of booster hose in the reel or basket, it is common for rural departments to carry perhaps an additional 250 feet of booster hose and frequently several lengths of good quality ¾-inch garden hose. By means of an adapter from garden to booster thread, the booster hose can be connected to the domestic or farm water service and a line run to the booster tank to help replenish the tank as the booster pump operates.

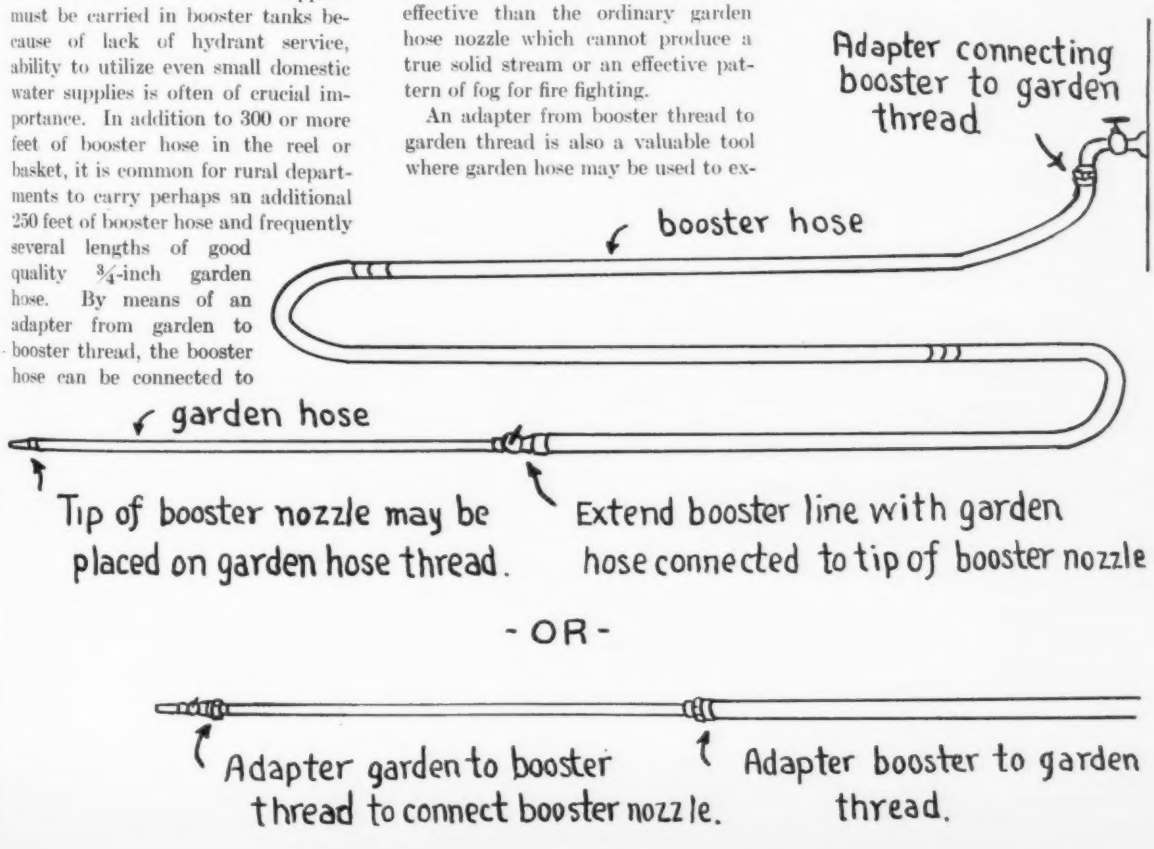
In other cases, it may be desired to extend the booster line by attaching more booster hose to the booster nozzle (for which the standard tip thread is garden hose thread).

By means of an adapter, it is also possible to attach the booster hose nozzle directly to domestic garden hose lines. Tests show that with the larger sizes of garden hose and reasonably good domestic service, it is sometimes possible to get as much as 6 to 8 gpm through garden hose. This is not equal to a regular booster line, but in the hands of an experienced fireman the booster nozzle may be much more effective than the ordinary garden hose nozzle which cannot produce a true solid stream or an effective pattern of fog for fire fighting.

An adapter from booster thread to garden thread is also a valuable tool where garden hose may be used to extend booster lines, although, if desired, the tip can be removed from the booster nozzle and the garden hose attached in its place. The tip then may be attached to the nozzle end of the garden hose.

The garden hose thread is approximately $1^{1}/_{16}$-inch outside diameter of the male thread, with 11½ threads per inch. The booster thread is approximately $1^{3}/_{8}$-inch o.d.m. with 8 threads per inch. Many fire departments have adopted the garden hose thread as their standard booster hose thread.

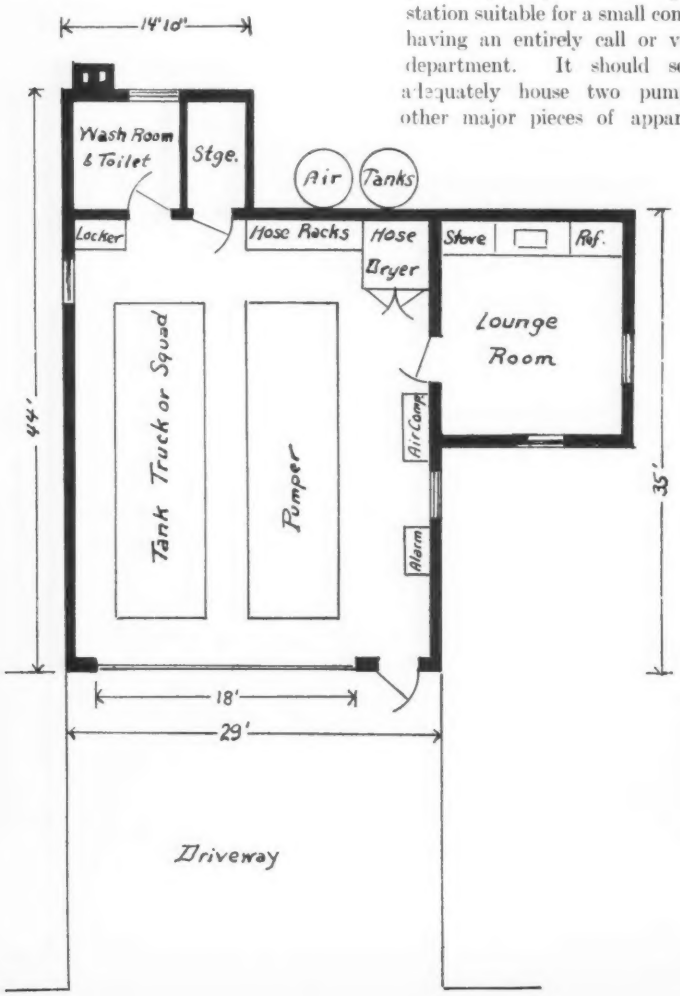
A pamphlet entitled *Standard Threads for Hose Couplings ½-Inch to 3-Inch* is available from the NFPA office on request.


Adapter connecting booster to garden thread
booster hose
garden hose
Tip of booster nozzle may be placed on garden hose thread.
Extend booster line with garden hose connected to tip of booster nozzle
- OR -
Adapter garden to booster thread to connect booster nozzle.
Adapter booster to garden thread.

A Two-Truck Fire Station for Call or Volunteer Fire Department

This is the second in a series of sketches of fire station layouts for small communities. This substantial and attractive building may be erected and equipped (exclusive of major fire fighting apparatus) at a comparatively moderate cost, even at the present time. Exact construction costs will vary with the materials used, cost of labor in the community, and the amount of work that fire company members decide to donate for their own station.

DESPITE HIGH construction costs, many residential communities are forced to provide new garage facilities for their fire fighting equipment, now housed in cramped and hazardous quarters. (See FIREMEN, June 1946, March 1947, for accounts of fire station fires.) Here is a simple plan for a compact and comparatively inexpensive fire department station suitable for a small community having an entirely call or volunteer department. It should serve to adequately house two pumpers or other major pieces of apparatus of similar size with plenty of floor space for maintenance and cleaning work around the apparatus. If the community grows to a size requiring paid firemen on duty, the building could be sold for other purposes and a new building erected at a time when building materials should be more obtainable for larger structures.



Important features of this station are the single large overhead type apparatus doors 18 feet wide, permitting rapid movement of either piece of apparatus. A front entrance door provided at one side of the apparatus door provides direct access to the side of the station where the fire alarm receiving cabinet is located. This cabinet will handle a circuit of twenty or more alarm boxes which record on a tape register. One fire alarm box is located on the front of the building and the others are distributed at important locations throughout the town, such as schools and at major street intersections.

Also located on one side of the station is an air compressor to fill the compressed air tanks for the coded air horn which sounds all boxes and other signals.

At the rear of the pumper is a hose drying cabinet and hose storage racks. There is a storage closet, and a toilet and sink room in a rear ell. If it is desired to house a junior ladder truck, the toilet and storage room would be put in another location and that space added to the apparatus floor. The apparatus floor is of concrete, painted

and adequately drained. The only basement is the room for the automatic oil heater located beneath the rear ell, the only access to which is from the outside. In localities where gas is available, automatic gas heat might be provided. This heater room is of non-combustible construction, including the ceiling. Fusible link and other emergency controls for the heating system, and a thermostatic detection system connected to the fire alarm box gives warning of any fire starting from the heating plant.

The walls of the structure are of concrete block or cinder block but may be of brick or stone if desired. The roof has a 30 degree pitch, is surfaced with asphalt shingles, and at the rear is surmounted by the alarm horn.

The apparatus floor is approximately 27 x 33 feet, inside dimensions, and the overall length of the structure, including the rear ell is only 44 feet. The apparatus building could be placed on a 30-foot wide lot, although a 50-foot lot to give an average of 10 feet at each side for light and air would be preferable. While not essential to the fire department service, it also would be desirable to provide a lounge room for the call and volunteer firemen at one side of the apparatus floor. This would be provided with stove, refrigerator, and sink, as well as chairs and card tables. The inside dimensions of this room would be approximately 14 x 16 feet. The exterior walls of the lounge could be of frame construction if desired. The purpose of this room would be to encourage firemen to frequent the station and thus be on hand for prompt response to calls.

Carbon Dioxide Equipment on New Pumpers at Hammond, Ind.

THE HAMMOND, IND., Fire Department, under Chief Joseph Scherer, has recently obtained delivery of two new 1,000 gpm pumpers built by the Mack Manufacturing Corporation. In addition to the usual water fire fighting equipment consisting of 2½-inch hose, 1½-inch hose, and ¾-inch booster line, equipped with both straight stream and fog nozzles, the apparatus carries 750-pound capacity low-pressure carbon dioxide fire fighting equipment built by Cardox Corporation of Chicago.

Hammond is in the center of the northern Indiana refinery area and a great number of oil and gasoline trucks travel its streets. The Hammond Fire Department has gained much experience using a 2-ton capacity carbon dioxide truck, which for three years has responded with the squad company in the central station on all runs. It is reported that the carbon dioxide has been used successfully in extinguishing basement fires, electrical fires, fires in walls and atties of homes, industrial fires, and many other fires where a smothering agent would prove useful or where water damage could be avoided by use of carbon dioxide gas.

The two new combination pumper-carbon dioxide trucks will be stationed in different stations to extend the range of the carbon dioxide protection. Each carries 750 pounds of liquid carbon dioxide stored in a mechanically refrigerated pressure vessel

Continued on page 19

"Who's Who" on the NFPA Staff

This is the fourth in a series of staff portraits of the guiding lights about the NFPA Executive Office at 60 Batterymarch St., Boston. These are the men who write and edit the books, magazines, posters, and pamphlets published under the insignia of the National Fire Protection Association. These are the men to whom you can turn for answers to your fire fighting, prevention, or protection problems.

WARREN Y. KIMBALL came to the NFPA Fire Record Department from the Washington, D. C., bureau of the *Chicago Tribune* in 1928. He joined Ladder Co. I of the Hingham, Mass., Fire Department; attended evening classes at Northeastern University and the Insurance Institute fire protection course. For several years he bunked regularly with Engine 23, one of the busiest companies in the Boston Fire Department.

In 1936 Mr. Kimball began the "Making a Good Job of It" column in *Volunteer Firemen*; became associate editor in 1938; and editor in 1943. The enlarged and improved publication became FIREMEN magazine in January, 1946.

In 1939 Mr. Kimball was assigned to the NFPA field engineering staff and thus became acquainted with the fire protection problems of many communities.

Mr. Kimball retains a supervisory capacity with the NFPA Fire Record Department; is a consultant for the International City Managers' Association, as well as for several major fire departments; has appeared on numerous firemen's training programs; and has participated in the editorial work connected with many NFPA publications.

The 1947 National Electrical Code

Wiring in Prefabricated Houses, Synthetic Insulation, Fluorescent Lamps, and Other Subjects Now Covered

THE ELECTRICAL COMMITTEE of the NFPA has presented a new edition of the *National Electrical Code*. The event has special significance, since the 1947 Code will more or less automatically become the law for electric wiring in thousands of cities in the United States and also in many jurisdictions where electric wiring is regulated by the state government. In fact, it will be enforced wherever electric wiring is used, since the National Electrical Code is also the basis of underwriters' requirements and is followed as good practice by manufacturers and electrical contractors, even where there is no specific local regulation of electric wiring.

The National Electrical Code is not an arbitrary set of rules but represents the consensus of the members of the NFPA Electrical Committee. The committee makes the Code rules keep pace with the electrical developments and each new edition incorporates advances in electrical wiring practices that have become recognized as safe.

The 1947 *National Electrical Code*, for example, covers for the first time provisions for electric discharge type of lamps. These are the so-called "fluorescent" lamps which have been developed during the last few years. The committee also looks forward to wiring for prefabricated buildings with an article cross-referencing provisions in the various articles of the Code on details of wiring methods to be recognized in such buildings.

Various new technical developments in the electrical field are recognized, including provisions for safeguarding installations of infrared lamps in industrial heating appliances. One application of these is the ovens for baking enamel finishes in the automobile and other industries. Other items where technological developments are represented by new regulations are electric welders, machine tools and X-ray equipment.

The National Electrical Code has special requirements for locations classified as hazardous and revisions of Chapter 5 may make it somewhat easier for persons using the Code to decide whether a given location may have hazardous conditions as a normal feature or the result of unusual conditions and accidental occurrences. It is still not too easy to judge whether a given situation requires "dust-tight" or "explosion-proof" equipment, but the definitions in Chapter 5 of the 1947 Code are likely to be helpful.

An outstanding revision are the provisions of Chapter 3, having to do with circuit conductors and particularly with insulation. These provisions may tend to reduce the cost of wiring. For example, conductors No. 14 and No. 12 AWG, with new types of insulation and with the pre-war type of rubber insulation, are permitted with 1/16 inches reduced overall diameter. The so-called GRS synthetic rubber, and also thermoplastic compounds, are now accepted for general use as insulation where voltages are not over 600. The allowable operating temperature for Type R wire is increased to 60° C.

Installers and enforcement personnel will find it necessary to compare the new provisions of Articles 210 and 220 with the former text, because of a revised plan for determining allowable loads on branch circuits. A new tabular instead of a textual method of specifying layout limitations is used in the 1947 Code.

Electricity is a leading cause of fire. Balanced against this, however, is a tremendous consumption of electrical power. It is fair to say that, because of the enforcement of the National Electrical Code, it is possible for any person to have electricity installed in his home or place of business with the assurance that it is a safe as well as a convenient form of light, heat and power.

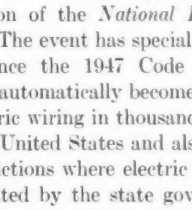
The National Electrical Code is only one of some 115 standards produced by the NFPA. Few of the other standards, however, have a more far-reaching effect. Uniformity of electric requirements has done much to make electrical power and light available to every home and place of business in the country at economical cost.

The NFPA maintains an electrical field service in connection with problems relating to the adoption of local wiring regulations. The NFPA electrical field engineer may be consulted as to how electrical inspection service and local electric wiring regulations may be set up where these are now lacking.

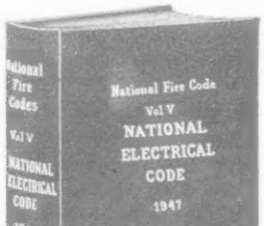
Please note that the NFPA Electrical Office is in Chicago, rather than at NFPA headquarters in Boston. The field engineer's address is: Victor H. Tousley, Electrical Field Engineer, National Fire Protection Association, 612 No. Michigan Ave., Chicago, Ill.

The 1947 National Electrical Code

Two Editions:



Right. Cloth bound, desk size, 6 x 9 inches, 408 pages (Vol. V, National Fire Codes) $2.00.



Above. Paper bound, pocket size, 4 x 6¼ inches, 384 pages (NBFU Pamphlet No. 70) 10c.

Accidents While Responding to Alarms — Not New

Volunteer Fireman Run Over by Apparatus in 1856

SERIOUS and even fatal accidents to firemen while responding to alarms is not a new hazard that came with the advent of the swift moving motor apparatus.

There was considerable danger in responding to alarms in hand engine days. Hand apparatus, whether pumper, hose reel, or ladder truck, in general was drawn by ropes run out from coils at the front of the apparatus. Streets, even in large cities, were poorly lighted at night and largely unpaved and rough. When the machines were going down hill momentum produced by gravity took effect and it was not unusual to have at least part of the crew "run off the ropes." A man who tripped or fell was in danger of being run over or crushed by a heavy machine. A mystery that has not been explained to modern firemen is how the oldtime smoke eater could pull the apparatus a mile or more to a fire and have any wind left for eating smoke. Yet it is known that there were many good inside firemen in the days of hand engines.

The following quotation from the *Firemen's Record*, of Washington, D. C., reports a fatal accident in that city in 1856. This incident also was recorded in stone as shown in the accompanying illustration.

Monument in Glenwood Cemetery, Washington, D. C., portraying the death of fireman Benjamin Greenup, run over by a pumper in 1856. The monument is faithful in every detail as to the men and apparatus. The volunteer firemen wore the red shirts and belts that are still the emblem of many vamps or veteran firemen's associations. The leather fire helmets remain much the same. The pumper had suction and discharge connections, an open playpipe, an air dome or chamber to take the pulsations out of the line, and the brakes or handles by which pressure was applied to the pistons. At the left side of the monument is shown the detail of a playpipe, officer's trumpet, and coiled length of leather hose that antedated the present cotton-rubber-lined hose. Not shown are the four ancient hydrants which form the corner posts of the cemetery lot.

"ON the night of May 6, 1856, as the Columbia Engine Company (now Engine Co. 3, District of Columbia Fire Department) were on their way down Capitol Hill to the fire at Shreeves' Stables, then situated on Seventh Street, Benjamin Greenup, a member of the Columbia Company, fell and the suction (pumper) ran over him. He was picked up and carefully attended, but before his comrades could convey him to the engine house, he died of his injuries. A few minutes before the alarm he had been singing to some ladies the song 'Good Night' — to them it was an eternal farewell. When he fell, his company kept on to the scene of the fire (with the exception of five or six who remained behind to assist him), what was their surprise on their return to hear of his death, and among that large body of strong hearty men there was not a dry eye.

"While the funeral of Mr. Greenup was taking place, another alarm of fire was received. Upon the arrival of the department, it was found that Mr. Shreeves' other stable had been fired — this stable adjoined the one burned three days previous — while the firemen were at work the wall fell and Ebenezer Lord was caught and covered up by the falling debris. The firemen went to work with renewed vigor and, notwithstanding the fact that the remainder of the wall was tottering, they dug away the bricks and rescued their comrade. Both these fires were the work of incendiaries, and a colored man by the name of Richard Thomas was arrested and committed to jail."

Fire Department Rules and Regulations 1856

Perhaps the following fire department rules and regulations will strike a responsive cord in the hearts of many firemen. Some of the provisions of these 1856 rules for volunteer firemen may not be too remote from rules in the 1947 rule book.

"On September 1, 1856, the following by-laws, regulations, etc., were adopted for the governing of the Washington Fire Department:

"All companies are requested to avoid passing with their apparatus on the pavement or foot-way unless compelled so to do by the condition of the streets.

"Each company is required to be cautious in the admission of members, and prompt in the expulsion of the disorderly.

"In returning from fires, or alarms of fires, the companies are requested to move with order and moderation, and should they meet another company, each is requested to take the right of the street.

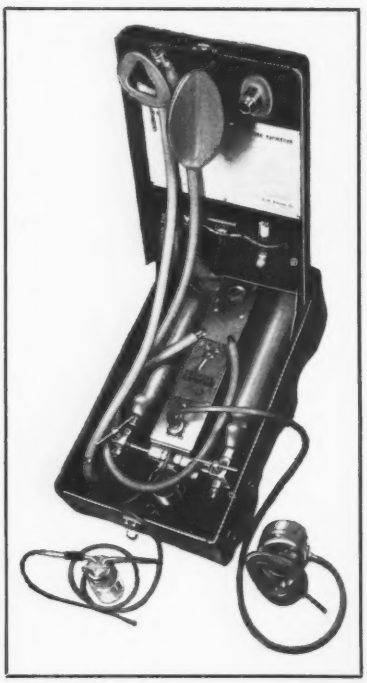
"It is recommended that every member of a fire company wear his equipment or badge at fires.

"No company shall admit minors as members of their respective companies without the written consent of their parents, guardians, or masters.

"The use of intoxicating liquors among the fire companies comprising the fire department is required to be entirely discontinued.

Continued on page 19

When Seconds Count In Saving Human Life be sure you have an

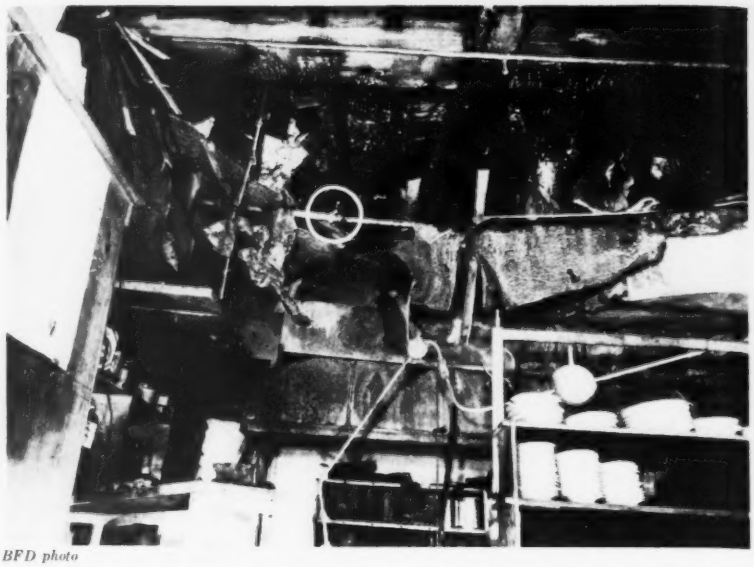


EMERSON RESUSCITATOR

Leading fire departments throughout the country have from actual experience with serious cases given the Emerson resuscitator, inhalator, and aspirator the reputation of being America's finest lifesaving instrument.

Your men and community are entitled to this protection. Write for literature or a demonstration.

J. H. EMERSON CO.
24 Cottage Park Ave.,
Cambridge, Mass.
Representatives in Principal Cities



BFD photo

The automatic sprinklers never had a chance to control the fire in this 1876 Boston multiple business block. Three ceilings installed at different periods (wood lath and plaster, sheet metal, and fibreboard) intervened between the sprinkler heads and timbers ignited by a grease flue over a kitchen range. Fire fighters responding to three alarms used 14 hand lines to route this smoky fire from concealed spaces of the much-remodeled structure. The final all-out came after more than seven hours work. Loss estimate: $55,000.

Press Association, Inc.

Los Angeles fire fighters battled a $10,000,000 waterfront fire on June 22, following an explosion on the tanker Markay which ignited piers on both sides of the channel. It was considered remarkable that the large oil storage tanks in the diked areas, seen in the foreground, escaped destruction.

Standards for Rural Apparatus

Continued from page 8

adequate rate of discharge. A reducer from 2½-inch to 1½-inch hose is recommended for the pumper to permit direct use of small hose from a pump outlet or from a longer line.

The hose body of the pumper must be able to carry the basic 1,000 feet of 2½-inch hose required to utilize the full capacity of the pumper and permit long lines for relays at rural fires. In addition, there must be room for two 200-foot leader lines of 1½-inch hose. This, equivalent to a 1,200-foot hose body, is standard with a number of manufacturers of this type of equipment and meets the requirement of the rating bureaus.

Minimum water tank capacity for a pumper is increased to 200 gallons with 300 gallons recommended. This is the largest size that can be carried on small commercial truck chassis without sacrificing hose load. The effectiveness of rural fire fighting to a large extent depends upon water tank capacity. It is desirable to have not less than 150 gallons per booster reel. The larger tank capacity has many uses apparent to rural fire fighters that cannot be enumerated here. Where heavier loads are contemplated, heavier truck chassis with a greater gross load rating or an additional rear axle are needed.

The basic water tank capacity of the water tank apparatus is set at 500 gallons (formerly 200 gallons), a maximum safe load for 1½-ton and 2-ton commercial chassis. The chief function of this truck is *to transport water* and to provide small stream equipment.

The pump on the rural tank apparatus is to be large enough, as a minimum, to provide two good streams through 1½-inch hose (100 gpm). It is recognized that many rural tank trucks carry pumps of 500 gpm (or greater) capacity and that these larger capacity pumps are to be desired where a comparatively small additional investment is possible. Such apparatus does not, however, replace the rural pumper. In general, both pieces are needed by the well equipped rural department.

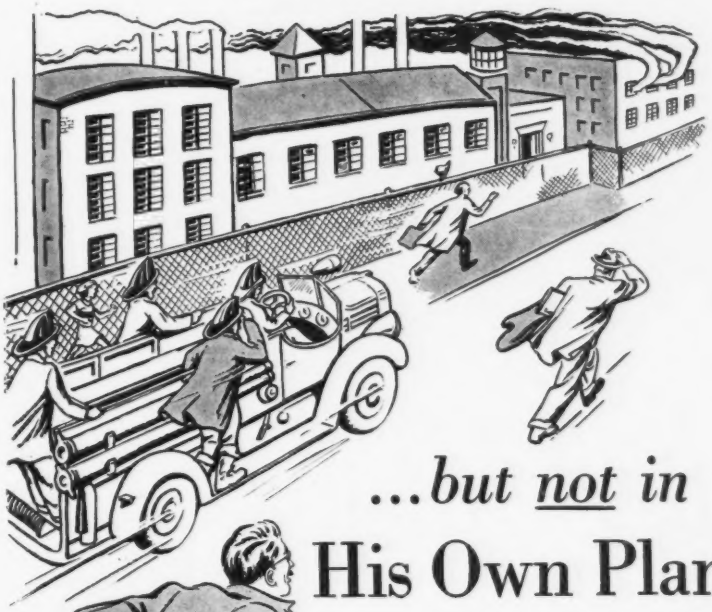
The revised specifications give recognition to the high-pressure type of rural water tank truck as an alternative to the somewhat larger capacity low-pressure pumping equipment usually found on water tank apparatus. This recognition is in line with the listing of such equipment by Underwriters' Laboratories for incipient Class A and B fires. Unless also equipped with a 500 gpm pump and a standard load of hose, such apparatus is not considered to qualify as a rural pumper.

The development and utility of combination fog-straight stream nozzles has been recognized by providing for at least one such nozzle for both the 1½-inch hose and for booster hose.

Suitable hose drying cabinets have received recognition as alternatives to hose drying racks in fire stations.

Provision of suitable protective clothing for volunteer firemen is recommended as being essential equipment for effective fire fighting.

Everybody loves to see a fire



...but not in His Own Plant

There's something exciting about a fire, but when it's your property, that's another story. Stop fires when they start with C-O-Two fire equipment. Prevent costly damage. C-O-Two is clean, modern, carbon dioxide fire protection. It's versatile; C-O-Two is used to protect electric and flammable liquid hazards of every size. It is non-conducting, non-deteriorating, harmless to the most delicate instruments.

See that your plant has C-O-Two protection. Check your dip tanks, bake ovens, spray booths, rheostats, switch panels, and other electric equipment. Don't overlook blueprint and record vaults. Then write us for a catalog or let one of our expert representatives help you plan complete C-O-Two fire protection.

C-O-TWO FIRE EQUIPMENT COMPANY
NEWARK 1 NEW JERSEY
Sales and Service in the Principal Cities of United States and Canada
Affiliated with Pyrene Manufacturing Company

This caused by This

But There's a Way to Prevent It!

Automatic Sprinkler Systems undoubtedly are the greatest single contribution ever made to fire protection. Yet without water even the most efficient sprinkler equipment is helpless in case of fire.

Closed shut-off valves and other conditions affecting the water supply and its distribution account for most of the destructive fires in sprinklered properties. Regardless of the number or frequency of inspections, there is always the possibility that a valve may be closed accidentally or maliciously *between inspections*. Valves often are closed while repairs are being made and then are left unopened.

ADT Central Station Sprinkler Supervisory and Waterflow Alarm Service provides the most effective assurance that sprinkler valves are kept open. By means of special electrical supervisory devices installed on the sprinkler system, closed shut-off valves and other abnormal conditions which might impair or nullify the effectiveness of the system are immediately and automatically reported to the ADT Central Station for prompt corrective action.

Waterflow Alarm Service makes the sprinkler system function as an automatic fire alarm, *automatically* summoning the fire department and other protective forces direct to the premises in the event of a fire or a serious leak.

May we tell you how this service can be applied to effect substantial economies while obtaining more complete and reliable protection? Write for descriptive bulletin "Assuring Sprinkler Efficiency."

ADT SPRINKLER SUPERVISORY AND WATERFLOW ALARM SERVICE

Controlled Companies of **AMERICAN DISTRICT TELEGRAPH CO.** *155 Sixth Avenue, New York*
CENTRAL STATION OFFICES IN ALL PRINCIPAL CITIES OF THE UNITED STATES

ADT

Electric Protection Services
AGAINST FIRE · BURGLARY · HOLDUP
A NATION-WIDE ORGANIZATION

Coming Events

July 28-August 1 — 9th Annual Pennsylvania Fire School, Lewistown.

August 4-22—14th Annual Short Course of the Oklahoma Fire College, Stillwater.

August 8-10—Ohio State Firemen's Assn. Convention at the Carter Hotel, Cleveland. Address all communications to Secretary M. W. Gifford, 5105 Market St., Youngstown 5.

August 19-22—Convention of the International Assn. of Fire Chiefs, Hotel Pennsylvania, New York City.

August 19-22—Firemen's Assn. of the State of New York convention, Catskill.

August 28-30—19th Annual Convention of the West Virginia Firemen's Assn., Charles Town. Pres. Sam Boland, Hinton; Sec'y J. D. Brehany, Ridgeley.

September 1-5—Western Pennsylvania Firemen's Training Institute, State Teachers College, California, Pa.

Training Program in Aroostook County, Maine

IN Aroostook County, Maine, for the first time under the direction of the State Department of Education, three two-day firemen's training schools were held at Mars Hill, Madawaska, and Caribou. The Mars Hill school, held June 23–24, was attended by 59 firemen from Houlton, Presque Isle, Easton, Island Falls, and Mars Hill. The Madawaska Fire Department was host to 55 men representing Van Buren, St. Agatha, Frenchville, Fort Kent, and Edmonston, N. B., on June 25–26. On June 27–28 Caribou was the meeting place for departments from Ashland, Marsardis, Limestone, Fort Fairfield, and the Perth-Andover, N. B., Fire Department.

The following subjects, requested by the Aroostook Fire Chief's Association, were included: basic ladder practices, basic salvage work, ventilation, and breathing apparatus.

Instructors for the school were Capt. James J. Cowan, drillmaster, Bangor; Chief Curtis Allen, Sanford; Chief Arthur Emmons, Saco; and Fred Hammond, drillmaster, Sanford; Morris Cates, director of vocational education, and Edward McMonagle, his assistant, were directors of the school.

FDNY Show

THE *Midnight Alarm*, the New York Fire Department's show, will be staged in Madison Square Garden, August 18–20, in connection with the 1947 convention of the International Association of Fire Chiefs. Registered delegates at the convention will attend the show on the night of August 20 as guests of the FDNY. Proceeds from the *Midnight Alarm* will go to the FDNY Welfare Fund. The show, now in rehearsal under the professional direction of Milton Stern, who staged *Hellzapoppin* and *Sons of Guns*, is composed of an all-fire-fighting cast. Tickets are on sale at Room 1122, Fire Headquarters, Municipal Building, New York City 7.

In addition to hair raising scaling-ladder rescues, breath-taking leaps from lofty heights into life nets, and smoke eaters springing out of bed in their shorts, the show is flavored with a "Floradora Sextette." To live up to its title, the *Midnight Alarm* ends on a midnight alarm for a fire in a tenement on the "Sidewalks of New York." This exciting finale of fire, smoke, ladder rescues, and fire fighting gives the FDNY a good chance to show some of its newest equipment in action.

About Our Members

SECRETARY Everett Johnston, of the Whitinsville, Mass., Fire Department, reports that the department was organized in 1890 and now, under the command of Chief P. B. Walker, protects a community of 7,500. Two pumpers, a ladder truck, and two forest fire trucks (one state owned) are housed in a combination fire station and garage owned by the Whitin Machine Works. The 65 call firemen are paid $30 a year, with 75 cents per fire extra for the "still alarm" crew.

CHIEF Jop. Kelble, of the Payne, Ohio, Fire Department reports that his department protects a town of 1,200, together with two adjoining townships and three grain elevators. The fire department is equipped with a pumper, a ladder and hose combination, and a rural tank truck of 1,350-gallon capacity. The department plans to purchase a new rural pumper with a 500-gallon tank. The call firemen are paid 75 cents for attendance at weekly drills and $1.00 per hour for alarms.

DO YOU WANT

- A NEW STATION?
- BETTER PAY?
- NEW APPARATUS?

1000 HOMELESS BY FIRE
CHILD STRIKES MATCH, STARTS OIL TANK FIRE
Porches Ablaze Cause Injury to Firemen
Blaze Routs 60 Guests At Wintha
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A Public Relations MANUAL for FIRE DEPARTMENTS

BETTER Public Relations Will Make Them Easier to Get!

The New

NFPA PUBLIC RELATIONS MANUAL FOR FIRE DEPARTMENTS

tells how to do this vital job.

$1.00 per copy postpaid.

Write for it today!

NATIONAL FIRE PROTECTION ASS'N
60 Batterymarch Street
BOSTON 10, MASS.

TRADE MARK

MEARL FOAM

FIRE OUT... Stays OUT!

The all-climate, dependable
MECHANICAL FOAM EXTINGUISHER
It flows—covers—seals—extinguishes
» » » Highly effective on oil and gasoline fires » » » Use with any kind of water—at any temperature—in all makes of equipment.

Approved for use under
Joint Army Navy Specification C-266

Write for descriptive bulletin

THE MEARL CORPORATION
153 Waverly Place, New York 14, N. Y.

PROPELLO-RAY LIGHT

Simultaneously alerting pedestrians and all traffic . . . while insuring safety to your vehicle and crew . . . the compelling effect of the Propello-Ray's roving blade of red light gets you *through*.

Double action means quicker re-action—for the natural warning of red is intensified in the Propello-Ray Light by a sweeping, rotating beam that can't be ignored.

Any hour . . . any season . . . the urgency of your call is dramatically announced with scintillating silence . . . there are no noisy gears or complicated parts in the high candlepower, sealed-beam Propello-Ray Light. All moving parts are handsomely encased in streamlined chrome weather-proof housing to guarantee dependable, satisfying service.

FEDERAL ELECTRIC COMPANY, Inc.
8717 SOUTH STATE STREET • CHICAGO 19, ILLINOIS

Achievements of a County Fire Association

THE FRANKLIN COUNTY Fire Fighters Association in Ohio presents an enviable example of what may be accomplished by extending fire protection by means of a county fire organization. According to NFPA member Charles R. Scott, assistant state fire marshal for rural fire protection, this association was the first in Ohio to assure county-wide fire protection. Further, each fire department in the county has signed contracts of mutual aid with other departments in their area.

FRANKLIN COUNTY, OHIO.

Franklin County is located in the center of the state and includes the rural and suburban area surrounding Ohio's capital city of Columbus.

The fifteen volunteer departments in the county association responded to 685 alarms last year, fighting fires that caused an estimated $218,269 damage. This figure represents an average of 8 percent damage to the $2,735,689 value exposed to these fires. Mutual aid response was given in nineteen cases. Emergency first aid squads of the various fire departments answered 313 calls for assistance.

Departments belonging to the county associations are: New Albany, Grove City, Upper Arlington, Canal Winchester, Obetz, Groveport, Dublin, Reynoldsburg, Mario, Westerville, Mifflin, Hilliards, New Rome, Grandview, and Worthington. These departments operate some twenty-one pieces of fire apparatus and emergency trucks.

On May 22, the association conducted a jubilee program at a local ball park to raise money for the installation of two-way radio on every

piece of fire apparatus in the county. A 40-page souvenir program carried more than 260 paid advertisements. This one-night program cleared some $8,000.

French Translation of "Arson Detection"

THE Fireman's Responsibility in Arson Detection, recently prepared by the NFPA Committee on Firemen's Training, has been translated into French, according to H. Rethoret, general manager of the Fire Underwriters' Investigation Bureau of Canada, who wrote,

"As you know, we have quite a number of French Canadians in fire departments who speak only French.

"As I was anxious to give them the proper instruction, I had the pamphlet translated into French, and through the co-operation of our fire chiefs, French copies, as well as English copies, were placed in fire stations so that our French Canadian firemen would also receive these instructions."

Accidents While Responding to Alarms

Continued from page 11

"Differences and misunderstandings arising between the companies shall be submitted to the standing committee of the department for settlement.

"However valuable as a fireman a member may be, if he is habitually turbulent and quarrelsome, it were better to dispense with his services as a fireman than his continuance should be the cause of constant broils and disturbances, and it is hereby recommended that every such member be stricken from the rolls of every company."

Carbon Dioxide Equipment

Continued from page 11

that takes up comparatively small space. Temperature of the stored liquid is maintained at approximately 0° F. and the resulting pressure is about 300 psi, as compared with approximately 840 psi in unrefrigerated storage.

The 200-foot, 7/8-inch carbon dioxide hose line is equipped with a nozzle that releases approximately 200 pounds of carbon dioxide per minute. The gas expands several hundred times in volume upon release and forms CO_2 "snow" at a temperature of 110° below zero.

MIDWESTERN
Protective Clothing
for Men of Action!

Here's Protection and Comfort in Your Hazardous Work of Safeguarding Life and Property against FIRE!

Today there is a real shortage of raw materials that meet our rigid specifications. As a result, we are unable to keep pace with the demand for Mackinaw Coats and other Midwestern clothing for immediate delivery.

We maintain our reputation by refusing to use inferior materials which will lessen the service of our products. This fact alone will make it well worth your while to place your order for scheduling into our production as soon as possible. There is no substitute for the extra protection, built-in comfort, and longer wear you get in Midwestern clothing.

Have your Midwestern dealer show you our complete line now made of natural rubber. Note the softness, the flexibility, the high grade materials used to assure long service, comfort, and protection. Available in white and ivory rubber.

Available for immediate delivery subject to prior sale, all sizes firemen's short and ¾ boots.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN MFG. CO. MACKINAW ILLINOIS
Manufacturers of the Famous MACKINAW Coats

NOW With REGULATION HEAD and FRONT

CAIRNS
"FLINT-FLEX"

Here's the latest (No. 725) model of this sturdy plastic helmet, designed to take standard front pieces interchangeable with CAIRNS regulation leather or aluminum helmets. The rugged one-piece construction with embossed reinforcing ribs is retained. The material is light—insulates against heat and electricity—resists crushing or fracture. And of course the FLINT FLEX HELMET has the removable snap-in CAIRNS CUSHION LINING. Prices are moderate—deliveries prompt. Write for Catalog 32A.

CAIRNS & BROTHER
Outfitters to Firemen Since 1836
(ALLWOOD), CLIFTON, N. J.

CIRCUL-AIR
FIRE HOSE DRYER

WRITE FOR BOOKLET
Illustrates how Circul-Air saves hose, shortens drying time, prevents mildew and rot, air conditions as it dries, improves station design.

THE CIRCUL-AIR CORPORATION
575 East Milwaukee Street
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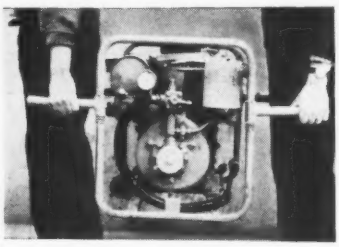
HALE FZZ PUMPING UNIT

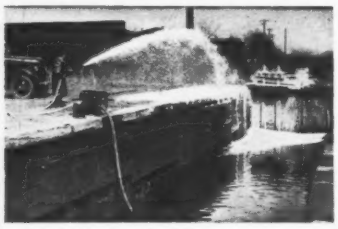
With a Direct-Connected 4-Cycle Air-Cooled Engine

- **READY FOR USE**
- **RUGGED**
- **POWERFUL**
- **PORTABLE**

Pumping Fog and Solid Stream Through 1½" Lines



Can Be Easily Carried. Also Available Strap-mounted or on Wheels



Pumping Foam. Built-in Foam Proportioner Available, if Specified.

Here's a pumping unit every Fire Company should own — the new Hale Model FZZ, ready for prompt delivery.

It's ideal for use with booster streams, fog or liquid foam. *(Foam proportioner is built in when specified.) Can be mounted on apparatus, making it possible to fight fires from moving equipment. CAPACITY: 60 Gallons per minute at 90 lbs. pressure; 150 G.P.M. at 30 lbs. pressure.

Write for FZZ Folder and new Bulletin on how to use Foam with FZZ Unit

HALE FIRE PUMP COMPANY
CONSHOHOCKEN, PA.

Fire Pumps in all Standard Capacities

Bellefonte, Pa., Crash

Continued from page 7

by a wall of fire which first had to be controlled to permit any attempt at rescue.

The nearest fire department was 3½ miles away. A call was immediately made by the airport manager. A 500 gpm pumper equipped with liquid foam and two 50-pound cylinders of carbon dioxide responded. The only water available was that carried on the single truck in its booster tank.

While this unit might have been used effectively if it had been immediately available, the fact was that it did not arrive at the scene for ten minutes. The fire department could not be criticized for this delay — it had a 3½-mile run to the scene and, as a volunteer organization, was delayed in securing the necessary manpower.

The best that could be done was done. Foam and carbon dioxide were used on the fire and successfully extinguished what flames remained. It was too late for rescue of the two occupants but some mail was saved by the fire fighters. The loss was two lives and a $15,000 aircraft.

Airport managers have the primary responsibility for aircraft rescue and fire fighting on the airfield and within the reasonably accessible environs where there is no conflict with the primary responsibility of other suitably organized and equipped public protective agencies. This responsibility has been defined in the NFPA *Suggested Standard Operating Procedures for Aircraft Rescue and Fire Fighting*, approved at the 1947 Annual Meeting of the Association. Copies of this standard are available from the NFPA Executive Office for 25 cents a copy.

Conflagration in Japan

Continued from page 6

reservoir since August 1945, nor had any attention been given to the water system. The filter beds were covered with scum several inches thick and, when we made a flow test at the beginning of the gridiron system, considerable charcoal was discharged from the hydrant. The reservoir was nearly empty at the time of our tests, about ten days after the fire occurred.

From the reservoir, a 14-inch main runs about three hundred yards to the

property line, reduces to 10 inches for about five hundred yards to the edge of the city proper and there supplies the gridiron system which consists mostly of 4-inch pipes. We made a flow test at a hydrant near the 10-inch and 4-inch junction where we found a static pressure of 26 psi which reduced to 2 psi when a 2½-inch hydrant butt was opened. From this level, the reservoir has an elevation of approximately one hundred feet. Another test made at the hydrant nearest the origin of the fire (the reservoir is about 125 feet above this level) showed a static pressure of 20 psi which reduced to zero when a 2½-inch hydrant butt was opened. This location is in the center of the business district. Ten 475 gpm pumpers, 41 trailer units, and 20 hand pumps were involved but most of these could not be used because of water shortage.

It was reported that 6,344 persons (mostly members of the "Keibodan," the volunteer firemen, of which Japan has about 1,350,000 and which functions as the fire departments in towns or as auxiliary to the paid fire department in large cities) were engaged in fighting this fire. It was reported, also, that most of the local Keibodan left their jobs of fire fighting to salvage goods from their own homes.

Several buildings, which had been built to replace structures destroyed in the May 1946 fire, were burned in the April 1947 conflagration. Nothing had been done after the former fire along city planning lines, but, following the 1947 loss, the Home Ministry board prepared a new city plan. This provided for a few fire breaks but we

felt that they were inadequate. We understand, also, that the Iida mayor has already given one or more exemptions which will permit structures to be reconstructed in the area designated as a fire break. Such authority for exemption is vested in the prefectural governor, and we believe that the mayor exceeded his powers.

Insurance companies carried policies totalling about 148,000,000 yen ($2,960,000).* Their loss on this insured property was 112,914,000 yen ($2,258,280) and the balance of the 1,600,000,000 yen ($32,000,000) loss was uninsured. Rates were increased a few months ago for all of Japan from 2 yen per 100 yen per year to 3 yen for concrete buildings, and from 5.5 yen per 100 yen valuation for home structures to 9 yen per 100 yen. Further increases will be necessary if the insurance companies are to survive. During the first three months of 1947, Japan has had 5,400 fires showing losses of 1,497,510,304 yen, 148 persons killed and 447 injured. Losses thus far greatly exceed those of last year.

** These figures are based upon one yen =$.02. As the value of the yen has not been stabilized in international exchange, these figures can be only approximate.*

National Fire Protection Association, International

Associate Membership

VOLUNTEER FIRE COMPANY SECTION ($10 annual dues) Eligible:

(1) all bona fide volunteer fire organizations in any community.

(2) all fire departments and companies in communities of less than 25,000 population.

(3) all industrial fire brigades.

Member volunteer fire companies receive ten copies of FIREMEN magazine each month, mailed to the homes of individual firemen. Beyond the ten, additional copies of FIREMEN cost $1 per year.

Volunteer Fire Company Section members, receive, at their headquarters, one copy of all publications sent to NFPA associate members.

ASSOCIATE MEMBERSHIP ($10 annual dues) Eligible: Individual fire department officers, firemen, and others interested in fire safety. NFPA associate members in the fire service receive: one copy of FIREMEN magazine monthly, the NFPA **Quarterly**, the monthly **News Letter**, technical standards, popular bulletins and posters.

All associate members have one vote in Association affairs.

New members of the Volunteer Fire Company Section are:

UNITED STATES

Brockwayville Volunteer Hose Co., Brockway, Pa.
Jerome Fire Dept., Jerome, Ariz.
King County Fire Prevention District No. 12. Seattle 66, Wash.
Martinez Fire Dept., Martinez, Calif.
Payne Fire Dept., Payne, Ohio
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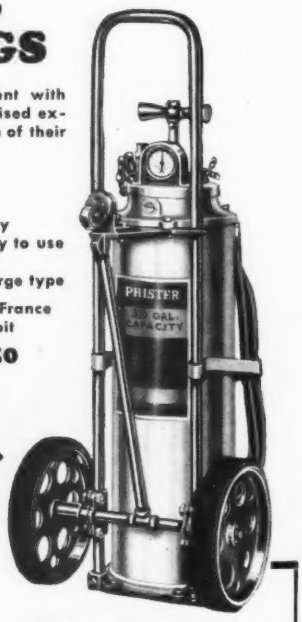

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MANUFACTURERS' ANNOUNCEMENTS

Hale Offers Literature on New Model Pumping Unit

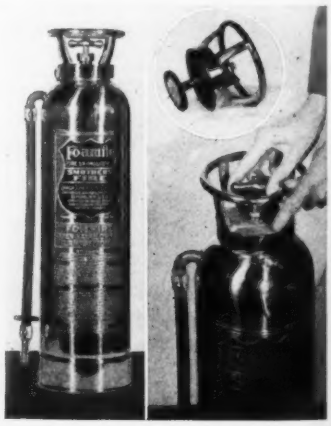
The Hale Fire Pump Co. of Conshohocken, Pa. has recently published an illustrated leaflet giving full information about their new Type FHH fire pumping unit. This is a skid or trailer-mounted single-stage centrifugal pump powered by a 25-H.P. Hercules engine. It is designed for on-the-spot protection around factories, warehouses, or summer camps and is said to be a capable auxiliary for forest fire fighting. The manufacturer calls attention to certain features of this unit such as the cooling system which consists of a radiator and auxiliary heat exchanger, and the Hale Exhaust Ejector Priming System. Copies of the leaflet will be sent by the manufacturer on request.

New Foam Extinguisher for Large Vehicles

Among the newest in fire extinguishers is the splash-proof Foamite Firefoam for vehicle service, recently announced by American-LaFrance-Foamite Corporation of Elmira, N. Y. It has a sealed stopper construction built into the top which prevents the chemicals from mixing until needed. Just a twist of the wrist releases the seal and the extinguisher is ready for action.

Except for carrying straps, this new Foamite fire extinguisher is similar to the Foamite Fire Department type carried on fire engines.

The manufacturer describes it as the ideal fire extinguisher for tank trucks and



other large vehicle units because it produces a fire-killing chemical foam equal to approximately 10 times its own capacity. It stops oil and gasoline fires and prevents reflashing. It has Monotype seamless drawn shell construction and is tested to 550 lbs. pressure.

With a stream range from 35 to 40 feet, the foam can reach fires beneath the truck body as well as all other surfaces.

In common with all foam type extinguishers, this new Foamite vehicle unit requires protection from freezing.

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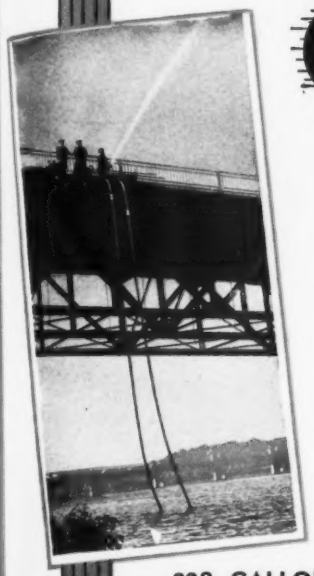

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CHIEF BRIDGES, KENT, WASH.

CITY OF KENT
WASHINGTON

May 14, 1946.

W. S. Darley & Co.
Chicago 12, Illinois

Gentlemen:

May 11th, we had a fire on a Milwaukee Railroad bridge, 1,000 feet long. The trestle was constructed of heavy timbers and well creosoted. The river was near, and the water 35 feet down from the bank, and fifty feet away. We tossed in our Hi-Lift Suction Booster, and pumped water for two hours steady and saved the 1,000-foot trestle and bridge across the river. The Milwaukee office at Seattle called in four other fire departments and all they could do was look at the fire fighting that was being done by our department because we were the only ones that owned a Champion Hi-Lift Suction Booster. The General Manager, the Superintendent and all the high officials of the Milwaukee Railroad were at this fire and they sure were interested to see that little pump throw so much water. If it hadn't been for the Hi-Lift the bridge would have gone and they could not let trains pass for weeks. Once more we made the Seattle papers on the front page with your Champion Hi-Lift. They replaced three pilings and the trains resumed going over the bridge. There was smoke going up in the sky for 200 feet and flames the same.

Yours truly,

Chas. Bridges, Fire Chief.

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